REMARKS

All claims 1-10 now being examined have been revised in a manner to hopefully avoid further rejection on the basis of being drafted to include process limitations as well as now more particularly defining over the remaining Keister reference being relied upon by the Examiner. The herein proposed amendment of all claims 1-37 appearing in the subject application to include "glass compositions" in the recited fiber reinforcement materials is for the purpose of providing consistency between the originally filed application and the amended claims. Antecedent basis for said claim amendments is found at page 8, lines 8-9 in the originally filed specification for the subject application.

With respect to the remaining process limitations found in all presently revised claims, the Examiner's attention is first directed to MPEP2173.05(p) which authorizes defining the claimed product in terms of the process by which it is made to be proper. Accordingly, the applicant has now defined the now claimed product in terms of having been formed by applying the reinforcement fibers about the outer surface of the pipe length "while maintaining said pipe length in its hollow condition" as a first patentable distinction from that either disclosed or suggested in the Keister reference. An additional patentable distinction over said reference is found in a further process limitation now being recited in the presently amended claims upon having the subsequent thermal bonding of the applied fibers to the outer wall surface "not utilizing further adherence means" which is deemed also totally absent from any suggestion in said reference. Said latter limitation alone forms a structurally dissimilar product than suggested in Keister wherein adhesive agents (see paragraph 5, lines 19-27 in said reference) or solvents (see paragraph 6, lines 48-58 in said reference) are said to be required for adherence of the reinforcement material to the underlying core. A still further patentable distinction appears in added claims 35-37 with said thermal bonding "resulting in a softening action" taking place between the applied fibers and the exterior pipe surface.

Reliance by the Examiner under 35USC102(b) for anticipation of the presently amended claims by Keister is respectfully deemed to be in error. As above pointed out, the

now claimed product is structurally dissimilar from Keister's product in dispensing with any need for adhesives or solvents in securing the applied reinforcement to the underlying pipe surface. Dispensing with the extraneous chemical agents employed in Keister's product not only represents a structural dissimilarity for the now-claimed product but is regarded to constitute a significant improvement thereover. Likewise, having the reinforcement fibers thermally bonded to the pipe length in the now claimed product provides a structure neither disclosed or suggested in said reference. From such complete absence of any thermal bonding suggestion in said reference, it understandably further follows that Keister's product does not have a final structure requiring that the fibers be adhered to the pipe surface solely in such manner.

In support of the present rejection, the Examiner finds the now claimed product to be "either identical or only slightly different" than Keister's product. A comparison between Keister's product and the applicant's product finds this not to be so. Thermal bonding of the applied fibers to the underlying pipe length instead of employing adhesive or solvent bonding produces a far simpler and superior result in several respects. Thermal bonding does not require foreign agents, such as the adhesive constituents or solvents being employed by Keister to become introduced into the final product. Understandably, the Keister procedure can require some removal of residue from these foreign agents to avert weakening of the resultant bond strength while effecting such removal adds complexity to the overall preparation of Keister's product. It cannot thereby be concluded that the now claimed product and Keister's product are equivalent since the results for the dissimilar bonding procedures are simply not the same.

Further reliance by the Examiner under 35USC103 for obviousness of all amended claims 1-10 in view of the Keister reference can also not be agreed with. The presently amended claims are all directed to a thermally bonded product as distinct from the dissimilar adhesive or solvent bonded products disclosed in Keister. A thorough and carefully study of said reference finds no suggestion of any kind therein for thermal bonding of the applied fibers to the underlying pipe

fiber wrapped joined pipe lengths to cause thermal bonding therebetween while the joined pipe lengths continue movement in the same linear direction] maintaining the joined pipe lengths in their hollow condition and the subsequent thermal bonding of the applied fibers to the outer wall surface not utilizing further adherence means.

11. (Once Amended) A method for reinforcement of a pipe length with inner and outer surfaces formed with a solid thermoplastic organic polymer which comprises:

(a) continuously moving the pipe length in a linear direction,

(b) wrapping a plurality of continuous juxtapositioned reinforcement fibers formed with a material composition selected from the group consisting of ceramics, metals, carbon, glass compositions and organic polymers while in an unbonded condition about the outer surface of said moving pipe length in a predetermined spatial direction, and

(c) heating the fiber wrapped pipe length sufficiently to cause thermal bonding between the reinforcement fibers and the pipe length while said pipe length continues to move in the same linear direction.

18. (Once Amended) A method for reinforcement of a plurality of identical pipe lengths joined together at the ends and each formed of the same thermoplastic polymer with inner and out surfaces which comprise:

(a) continuously moving the joined pipe lengths in a linear direction,

(b) wrapping a plurality of continuous juxtapositioned reinforcement fibers formed with a material composition selected from the group consisting of ceramics, metals, carbon, glass compositions and organic polymers while in an unbonded condition about the outer surface of each moving joined pipe length in a predetermined spatial direction, and

(c) heating the fiber wrapped pipe lengths sufficiently to cause thermal bonding between the reinforcement fibers and the pipe lengths while said joined pipe lengths continue to move in the same linear direction.